

# INTERNATIONAL SEARCH REPORT

International Application No  
PCT/EP2004/004806

A. CLASSIFICATION OF SUBJECT MATTER  
IPC 7 602F1/355 G02B6/134

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)  
IPC 7 G02F G02B

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the International search (name of data base and, where practical, search terms used)

EP0-Internal

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	DOMENECH M, DI PAOLO R E, LIFANTE G, CUSSO F: "Blue light by SHG in diode pumped LiNbO <sub>3</sub> waveguides" PHYSICA STATUS SOLIDI A, vol. 192, no. 1, 15 March 2002 (2002-03-15), pages 135-138, XP002318439 * abstract; sections "Introduction", "Experimental Procedure" * ----- -/-	1-7

Further documents are listed in the continuation of box C.

Patent family members are listed in annex.

### Special categories of cited documents :

- \*A\* document defining the general state of the art which is not considered to be of particular relevance
- \*E\* earlier document but published on or after the International filing date
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- \*O\* document referring to an oral disclosure, use, exhibition or other means
- \*P\* document published prior to the International filing date but later than the priority date claimed

- \*T\* later document published after the International filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- \*X\* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- \*Y\* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- \*&\* document member of the same patent family

Date of the actual completion of the International search

21 February 2005

Date of mailing of the International search report

03/03/2005

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	<p>CANTELAR E, DI PAOLO R E, SANZ-GARCIA J A, PERNAS P L, NEVADO R, LIFANTE G, CUSSO F: "Second-harmonic generation in Zn-diffused periodically poled LiNbO<sub>3</sub> channel waveguides" APPLIED PHYSICS B, vol. 73, 30 October 2001 (2001-10-30), pages 515-517, XP002318440 * sections "1. Introduction", "2. Experimental procedure", "3. Results and discussion" *</p> <p>-----</p> <p>BARRY I E ET AL: "Microstructuring of lithium niobate using differential etch-rate between inverted and non-inverted ferroelectric domains" MATERIALS LETTERS, NORTH HOLLAND PUBLISHING COMPANY, AMSTERDAM, NL, vol. 37, no. 4-5, November 1998 (1998-11), pages 246-254, XP004256024 ISSN: 0167-577X * section "2. Materials and methods" *</p> <p>-----</p> <p>TWU R-C ET AL: "ZN INDIFFUSION WAVEGUIDE POLARIZER ON A Y -CUT LINBO<sub>3</sub> AT 1.32-MUM WAVELENGTH" IEEE PHOTONICS TECHNOLOGY LETTERS, IEEE INC. NEW YORK, US, vol. 12, no. 2, February 2000 (2000-02), pages 161-163, XP000912637 ISSN: 1041-1135 * section "II. Experiments" *</p> <p>-----</p> <p>SHIGEMATSU Y ET AL: "FABRICATION OF LINBO<sub>3</sub> TE/TM WAVEGUIDES FOR 1.5 MUM WAVELENGTH BAND BY ZN/NI DIFFUSION IN LOW-PRESSURE ATMOSPHERE" JAPANESE JOURNAL OF APPLIED PHYSICS, PUBLICATION OFFICE JAPANESE JOURNAL OF APPLIED PHYSICS. TOKYO, JP, vol. 41, no. 7B, PART 1, July 2002 (2002-07), pages 4825-4827, XP001163083 ISSN: 0021-4922 * sections "1. Introduction", "2. Fabrication", figures 1-3, table 1 *</p> <p>-----</p> <p style="text-align: center;">-/-</p>	1-7
Y		1-7
Y		1-7
Y		1-7

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PCT/GB2004/004806

## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	<p>SUHARA T ET AL: "FABRICATION OF ZN:LiNbO<sub>3</sub> WAVEGUIDES BY DIFFUSING ZNO IN LOW-PRESSURE ATMOSPHERE"            JAPANESE JOURNAL OF APPLIED PHYSICS, PUBLICATION OFFICE JAPANESE JOURNAL OF APPLIED PHYSICS. TOKYO, JP, vol. 39, no. 8B, PART 2, 15 August 2000 (2000-08-15), pages L864-L865, XP000977869            ISSN: 0021-4922            * Introduction *</p> <p>-----</p>	6,7
Y	<p>YANG C ET AL: "Studies of photorefractive crystals of double-doped Ce,Fe:LiNbO<sub>3</sub>"            OPTICS COMMUNICATIONS, NORTH-HOLLAND PUBLISHING CO. AMSTERDAM, NL, vol. 175, no. 1-3, February 2000 (2000-02), pages 247-252, XP004189588            ISSN: 0030-4018            abstract</p> <p>-----</p>	6,7